

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM (CI-XXXX)
FOR
THE BOEING COMPANY
SANTA SUSANA FIELD LABORATORY
(FILE NO. 04-022)**

The Boeing Company (hereinafter Discharger) shall implement this Monitoring and Reporting Program (M&RP) on the date of issuance of the Waste Discharge Requirements (WDRs). The reports detailed in Order No. R4-2004- XXXX shall be submitted as required.

I. REQUIRED REPORTING

- A. The Discharger shall submit the following reports to this Regional Board in accordance with the schedules specified.
1. Unless otherwise approved by the Regional Board Executive Officer (Executive Officer), monitoring reports should be submitted in PDF or JPEG format (it is preferred that tabular laboratory analytical data be submitted in MS Excel or Access format) that are recorded in CD-ROMs. However, all lab data must have some chronological order in the electronic format, so that any data that is quoted or needed can be easily and precisely located ;
 2. Hard copies of the cover letter, the main report text, and any tables and/or figures that are directly quoted in the main report, should be submitted with the CD-ROM. The hard copies should be signed by a responsible officer(s), as required in section III.E of this M&RP; and
 3. All original laboratory reports, quality assurance and quality control (QA/QC) data, and field records that are used to prepare the reports must be kept in the land treatment's Operating Record, as required in California Code of Regulations, title 27, section 20415(e)(16). The data must be available for Board staff review, if such review is required.
- B. Reports shall include, but should not be limited to, the following items and sequence:
1. **Transmittal Letter:** A letter transmitting the essential points shall accompany each report of actions planned or taken. The letter shall include a discussion of any violations or non-compliance with the WDRs

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found during the current reporting period, and shall describe actions taken or planned for correcting those violations. If no violations have occurred, this shall be stated in the transmittal letter.

2. **A Table of Contents:** The table of contents shall identify explicitly all sections and referenced components or data (summaries, tables, figures, drawings, laboratory data, laboratory summary, appendices, and any other formats) by section and/or page number.
3. **Site Conditions** - General discussion of Building areas 316, 359, and 376 (Site) conditions (weather, soil, etc) relative to soil treatment and monitoring.
4. **Narrative Description** – A narrative discussion of the various Site soil treatment monitoring activities and results. Each requirement of Part II of this M&RP shall be specifically discussed.
5. **Laboratory Results:** Laboratory results and statements demonstrating compliance with Part II of this M&RP. Results of additional sampling and analyses performed at the land treatment units, outside of the requirements of this M&RP, shall be summarized and reported. If the results of such additional sampling and analyses have or will be reported under separate cover, a statement to that effect shall be included in the monitoring report.

II. LAND TREATMENT FACILITY SOIL MONITORING

Soil Monitoring

- A. Soil moisture monitoring will be performed on twenty-four soil samples to be collected at 12 different locations and at two different depths, and analyzed quantitatively, as specified below:

Parameter	Method	Frequency
Soil Moisture	EPA 160.3M	(1)Immediately following treatment.

Twelve more soil moisture-sampling locations will be selected for qualitative evaluation (i.e., visually), with a bias of samples to be taken at the southern portions of the Building 359 area where bedrock is the shallowest.

- B. Additionally, soil sampling will be done to evaluate the effectiveness of treatment to reduce perchlorate in soil. Twenty-three samples for laboratory analysis will be composited and taken in a manner at the areas described below:

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- Building 316 Area – Collect 4-into-1 composite samples from 8 discrete locations and depths within the treatment zone, creating two samples for laboratory analysis.
- Building 359 Area – The Building 359 area is divided into four quadrants. From each quadrant 4-into-1 composite samples will be collected from 20 discrete locations and depths within each quadrant, creating 20 samples for laboratory analysis.
- Building 376 Area – Collect 4-into-1 composite samples from four discrete locations and depths within the treatment zone, creating one sample for laboratory analysis.

The total soil volume treated is approximately 24,000 cubic yards, which means at least one soil sample per every 300 cubic yards shall be taken for all areas of the Site. Results shall be submitted in the reports as specified in below:

Parameter	Method	Frequency
Perchlorate	EPA 314.0	(1) At the initiation of treatment Immediately following treatment; (2) 6-8 weeks after treatment.
Moisture	EPA 160.3M	(1) At the initiation of treatment Immediately following treatment; (2) 6-8 weeks after treatment.
Total Organic Carbon (TOC)	EPA SW-846	(1) At the initiation of treatment Immediately following treatment; (2) 6-8 weeks after treatment.

Groundwater Monitoring

- C. Groundwater will be monitored by collecting samples from piezometers PZ-067, PZ-068, and PZ-003, from shallow well RS-2, and from deep wells RD-73, RD-77, HAR-24, and HAR-25 (locations shown on Figure 4 in the WDRs). Groundwater samples will be chemically analyzed for bromide ion (~~inductively coupled plasma—mass spectroscopy (ICP-MS)~~[EPA Method 300.0](#)) and perchlorate (EPA Method 314.0) on a quarterly basis for one year.

Parameter	Method	Frequency
Bromide Ion	EPA Method 300.0	Quarterly
Perchlorate	EPA 314.0	Quarterly

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III. GENERAL PROVISIONS FOR SAMPLING AND ANALYSIS

- A. All sampling, sample preservation, and analysis shall be performed in accordance with the latest editions of "Guidelines Establishing Test Procedure for Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (U.S. EPA) and U.S. EPA SW-846 Methods (dated December 1996).
- B. All chemical analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. No changes shall be made in the sampling grid size without prior approval of the Executive Officer.
- C. The Discharger shall maintain all sampling and analytical results, including chain of command, date, exact location, and time of sampling, date analyses were performed, name of laboratory and analyst, analytical techniques used, and results of all analysis. Such results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board.

IV. SPECIFIC REPORTING REQUIREMENTS

- A. The following technical reports shall be filed with the Regional Board:
 - 1. An "Initiation of the Happy Valley Soil Treatment Report", shall be submitted to this Regional Board 30 days after soil treatment has begun. The report shall include initial levels of perchlorate detected in soil **before** at the initiation of treatment, and a description of all preparations made in order to begin the biotreatments.
 - 2. A "Happy Valley Land Treatment Completion Report" shall be submitted within 30 days after completing land treatment, verifying that bioremediation is complete for the land treatment zone. The report shall include all data collected to date, including the results of monitoring moisture, perchlorate, TOC, the amounts of all constituents actually applied, and all groundwater data to date. A description of the process, and any laboratory results as described in II.B above shall also be included. The technical reports submitted shall contain the following minimum information:
 - a. Quantity of waste material treated during the reporting period.
 - b. Quantity of water and nutrients added to the land treatment units during the report period.
 - c. A statement certifying that storm water runoff was prevented from entering the land treatment area, other than rainfall directly on the

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land treatment units, and that no Site materials were carried away from the land treatment area by rainfall runoff.

- d. Color photographs of the land treatment area shall be taken and included in the report.
3. A "Happy Valley Final Completion Report" shall be submitted 15 months from the completion of the treatment. The report shall include the final perchlorate contamination levels of the treated soils, and all groundwater data, as well as laboratory analysis and data, and indicate the quantity and final disposition of the land treated material. The report shall also include data from any other procedures taken or approved of by the executive officer while this Order is in effect for removing perchlorate from the Site. A statement, signed by a responsible official of the Discharger, shall be included stating that the land treatment was completed in accordance with the requirements and provisions of Order No. R4-2004-XXXX.
4. If any groundwater samples are not taken from peizometers or wells for the report submittals described above, the report shall so state, and give the reason why.
- B. All technical reports prepared for submittal to the Regional Board shall be signed by a California registered professional engineer, a registered geologist, or certified engineering geologist.
- C. For every item where the requirements are not met the Discharger shall submit a statement of the actions undertaken or proposed, together with a timetable, to bring the discharge back into full compliance with the requirements at the earliest time.
- D. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the data, the constituents, and the concentrations are readily discernible. The data shall be summarized to determine compliance with waste discharge requirements.
- E. Monitoring reports submitted to the Regional Board shall be signed by:
 1. In the case of corporation, principal executive officer at least the level of Vice President or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;
 2. In case of partnership, a general partner;
 3. In case of sole proprietorship, the proprietor;

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4. In the case of a municipal, state or public facility, either a principal executive officer, ranking elected official, or other duly authorized employee.
- F. Each report shall contain the following completed declaration:
- “I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”
- G. These records and reports are public documents and shall be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.
- I, Dennis A. Dickerson, Executive Officer, do certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on ~~May 6~~July 1, 2004.

Jonathan Bishop
Interim Executive Officer

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